

# Install Pressurized Storage of Condensate



Partner Reported Opportunities (PROs)  
for Reducing Methane Emissions

## PRO Fact Sheet No. 502

### Applicable sector(s):

☒ Production ☒ Processing ☒ Transmission and Distribution

**Partners reporting this PRO:** Burlington Resources

**Other related PROs:** Capture Methane Released from Pipeline Liquid Tanks, Install Flares, Recycle Line Recovers Gas During Condensate Loading

Compressors/Engines ☐  
Dehydrators ☐  
Pipelines ☐  
Pneumatics/Controls ☐  
Tanks ☒  
Valves ☐  
Wells ☐  
Other ☐

### Technology/Practice Overview

#### Description

Natural gas production is often accompanied by significant amounts of water and condensate. The condensate is saturated with methane at pipeline pressures that range up to 750 psig. When transferred to atmospheric storage tanks, a pressure drop occurs causing the methane to flash out to the atmosphere. Operators often vent this gas to the atmosphere. Interstage knockout in multi-stage compressors with interstage cooling also contains raw NGL saturated in methane. If transferred to atmospheric storage, nearly all the methane will flash and vent to the atmosphere.

This partner reported pressure storage, requiring pressurized transport of condensate to a gas plant for economic recovery of gas liquids and associated methane, volatile organic compounds (VOCs), and hazardous air pollutants (HAPs) emissions reductions.

#### Operating Requirements

Pressurized storage requires the use of pressurized transport vehicles.

#### Applicability

This technology is applicable on all gas well and gathering/booster compressors.

### Methane Savings: 7,000 Mcf per year

#### Costs

Capital Costs (including installation)

☐ <\$1,000 ☐ \$1,000 – \$10,000 ☒ >\$10,000

Operating and Maintenance Costs (annual)

☐ <\$100 ☐ \$100-\$1,000 ☒ >\$1,000

#### Payback (Years)

☐ 0–1 ☒ 1–3 ☐ 3–10 ☐ >10

#### Benefits

Reducing methane emissions was an associated benefit of the project.

### Methane Emissions Reductions

Partners estimate condensate production of 10 barrels per MMcf of gas production and methane emissions of 250 scf per barrel of condensate. The condensate production estimate was made using a Hysim computer simulation program. Actual gas composition and condensate production will be unique to each production reservoir. Total partner reported savings were 27,992 Mcf per year for 4 installations of pressurized storage tanks.

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## **Economic Analysis**

### **Basis for Costs and Savings**

A methane emissions saving of 7,000 Mcf per year for each pressure storage installation was reported by the partner. Savings is based on a 400 barrel pressurized tank that stores gas liquids containing 250 scf of methane per barrel of condensate.

### **Discussion**

The primary benefit of installing the pressurized storage tanks is to reduce VOC and HAP emissions. The capital cost, including installation, was reported to be \$37,500 in 1998. The operating costs are estimated at \$2,500 for an operator to load tank trucks for 100 hours annually. The savings from recovering methane will justify the costs over a two-year period.